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RICHARD NEWTON HILL, JR.

**Fax**

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To: Mr. Chuck Freay

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Pages: 1

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Date: Friday, March 09, 2007

Re: Application No. 10/600701, Applicant: Richard Newton Hill, Jr., Filed: June 23, 2003,  
TC/A.U.: 3746, Examiner: Charles G. Freay

Hill flexible connector improvements over Anderson flexible connector

[ ] Urgent [ X ] For Review [ X ] Please Comment

• **Comments** Dear Chuck,

The Hill flexible connector is an improvement over the Anderson flexible connector in the following ways –

1. The Anderson flexible connector is used to lift the piston without ballast and pump on the upstroke while allowing fluid to flow into the pumping chamber under the force of gravity on the down stroke.
2. This mandates the use of rigid shaft attached to the flexible connector at the shaft's upper end while the shaft's lower end is connected to the piston.
3. The upper end of the Anderson pump must be enclosed when the flexible connector is used this way.
4. Either packing or sealing "O" rings must be used where the shaft exits the pumping chamber and connects to the flexible connector.
5. Using the flexible connector to pump on the upstroke mandates the pumping chamber be defined as the upper top surface of the piston, enclosed top cylinder, cylinder walls between the top of the piston and the top of the cylinder, cylinder shaft, packing and/or "O" rings surrounding the shaft and the hole at the top of the pumping cylinder where the shaft exits.
6. The Anderson flexible connector with it's rigid shaft connection restricts the length of the pumping motion to the length of said shaft.

Whereas my connector is an improvement as it –

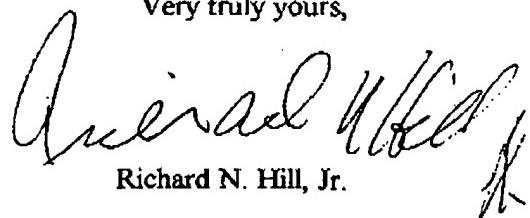
1. The Hill flexible connector raises the weighted piston with ballast, bringing fluid in under the force of gravity on the upstroke and pumping the fluid out by the weight of the ballasted piston on the down stroke.

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2. This eliminates the need for a rigid shaft between the flexible connector and piston.
3. This eliminates the need for an enclosed upper end as the pumping chamber.
4. This eliminates the need for packing or sealing "O" rings around a rigid shaft.
5. The Hill flexible connector allows the pumping chamber to be defined by the bottom of the surface of the piston, cylinder walls and enclosed bottom of cylinder only.
6. The Hill flexible connector allows a pump stroke that is limited only by the length of the cylinder thereby being able to create a pumping chamber of any length required, without concern over the flexible connector or it's attachments, as is a necessary concern in the Anderson flexible connector.

I think I have defined enough differences between the Anderson and my flexible connector to make it a patentable improvement. Your comments will be appreciated.

Very truly yours,



Richard N. Hill, Jr.